Introduction : Military maintenance in early modern Europe : The northern exposure

Talvitie, Petri

Helsinki University Press
2021

Talvitie , P & Granqvist , J-M 2021 , Introduction : Military maintenance in early modern Europe : The northern exposure . in P Talvitie & J-M Granqvist (eds) , Civilians and military supply in early modern Finland . Helsinki University Press , Helsinki , pp. 1-17 . https://doi.org/10.33134/HUP-10-1

http://hdl.handle.net/10138/331824
https://doi.org/10.33134/HUP-10-1

CHAPTER 1

Introduction: Military Maintenance in Early Modern Europe

The Northern Exposure

Petri Talvitie and Juha-Matti Granqvist
University of Helsinki

Military and civil spheres are more or less isolated enclaves in our present-day Western world. Soldiers live and operate separate from the rest of the society, and, besides the annual parades and the possible compulsory military service, these two worlds have little contact. Wars are even more remote incidents, as they are mostly fought in far-away countries.

In early modern Europe, the situation was different. Not only was the continent war-torn, but the civil and military spheres were also closely interwoven during peacetime. The period from the 16th century onwards has been characterised as the age of military revolution: warfare was modernised, the size of armies grew rapidly, and more and more state revenues were needed to construct fortresses and navies, as well as to fund and provision the troops. Scholars like Geoffrey Parker have even attributed the

How to cite this book chapter:
Talvitie, Petri, & Granqvist, Juha-Matti (2021). Introduction: Military maintenance in early modern Europe – The northern exposure. In Petri Talvitie & Juha-Matti Granqvist (Eds.), *Civilians and military supply in early modern Finland* (pp. 1–17). Helsinki University Press. DOI: https://doi.org/10.33134/HUP-10-1

birth of the modern bureaucratic state to the military revolution, as nations had to collect their taxes and manage their resources more efficiently than before to sustain their growing armies.[1]

Pre-19th-century armies were not public institutions to the same extent that they are today – or at least were during the 19th and 20th centuries. European rulers delegated the construction of warships and fortresses to private contractors, and their services were also used for arms and munitions manufacturing, clothing, army transportation and the provisioning of armies and navies. Furthermore, intermittent warfare was often funded by wealthy merchants and other private individuals, who became important financiers and subcontractors for the crown.

In the past few decades, there has been a marked global trend towards privatisation in national services and an increased use of contractors in military supply and operations. Arguably, all Western armies have become more or less dependent on private suppliers and security services. To understand this development, it is worth looking back at how armies were sustained before the French Revolution. Early modern states could not have managed without resorting to civilians – national or foreign – specialised in bridging the gap between supply and demand.

***

The prevalence of private contracting and the army's dependence on civilian maintenance has been highlighted by several historians discussing the nature of early modern warfare. One of the early major examples is Fritz Redlich's 1960s study *The German Military Enterpriser and His Work Force*, which traces the evolution of mercenary troops in Germany between 1450 and 1650.[2] Also, the importance of the billeting system has been recognised in the earlier research.[3] It is justified to argue, however, that, during

[1] Parker 1988.

[2] Redlich 1966; also, Géza Perjés refers to contractors in his comparative article on army provisioning in Europe: Perjés 1970, pp. 49–51.

[3] See, e.g. van Creveld 1977, p. 7.

the past 20 years or so, the theme has received much more systematic attention in historical research than before, and, as a result of this renewed interest in non-state actors' involvement, some of the established conceptions of civil–military relations have been challenged.

Most recent studies concentrate on the outsourcing of military activities, which was a common practice throughout Europe in the early modern period and particularly in France, Spain, Britain and the Netherlands, as well as in several German principalities. According to David Parrott, 17th-century military commanders were basically proprietors of their regiments, acting relatively independently through their own networks of arms producers, merchants, transport operatives and creditors.

The level of outsourcing was probably highest in Britain, where responsibility for most war supplies and manufacturing was assumed by private entrepreneurs rather than by government establishments during the 18th century. Uniforms, equipment, provisions, and horse fodder were purchased on contract, and large fortifications in England were built by contractors. Also, the vast majority of British warships were provided by merchant shipyards. Traditionally, merchants operating in the military business have been accused of rent-seeking at the expense of the crown, but recent studies have found that the level of corruption was actually quite low. In reality, the British military supply system worked in a highly efficient manner, which partly explains Britain's naval and military success in the Seven Years War and in the Napoleonic Wars.[4]

What is common to all the studies mentioned above is their desire to re-examine established conceptions about the impact of war and military organisation in state formation. According to the older standard narrative, put forward especially by Charles Tilly, the nearly constant and resource-demanding nature of warfare between the late 15th and early 19th centuries forced European rulers to centralise their administration and to develop efficient and meritocratic administrative machineries to collect resources – land, labour and capital – from the territories they ruled. As

[4] Lynn 1997; Bannerman 2008; Knight & Wilcox 2010; Parrott 2012; Goossens 2014; Torres-Sánchez 2016; Torres-Sánchez et al. 2018.

regards the armed forces, they had also been absorbed directly into the state's administrative structure by the 18th century, drastically curtailing the involvement of independent contractors.

Historical literature on the topic has termed this new type of state the national state, the power state, the military state, or the fiscal-military state. According to Jan Glete, the lattermost term is the most useful one, because it puts equal emphasis on the income and expenditure parts of resource flows: European state budgets became enormously inflated during the early modern period, and most of the revenues were spent on war.[5]

David Parrott criticises these basic conceptions of state-capacity theorists by suggesting that 'the scale, competence and resources of early modern governments have been greatly overestimated, and their capacity to achieve objectives correspondingly exaggerated'. In France, offices were sold to the wealthy elite to raise funds for the state, not to increase the efficacy of the administration. Elsewhere, the number of employees of the crown remained small and their freedom of action was curtailed by individual, territorial and institutional prerogatives.

The extensive outsourcing of public authority to private contractors offered a solution to these restrictions; it was the most efficient means of mobilising military resources considering the limited political and administrative capabilities of early modern rulers. According to Parrott, the evolution of military enterprise created mechanisms by which rulers managed to achieve 'a more extensive and effective mobilisation of private resources than would otherwise have been possible from their own fiscal and administrative capacities'. In that sense, there is no incompatibility between the growth of the power of the state and the development of a substantial sphere of private military activity.[6]

Why, then, were the contractors willing to offer credit and other services to the state despite the fact that wars were unpredictable events and the risk of losing everything was high? According

[5] Tilly 1990; Glete 2010, p. 9.

[6] Parrott 2012, p. 316. See also Fynn-Paul et al. 2014, p. 10; Torres-Sánchez 2016.

to David Parrott, the principal motivation was profit: 'Financial reward was a driving force in explaining the attraction of military enterprise, and must be explored as a primary motive for the involvement of many commanders and colonels, as well as for those bankers and financiers who were willing to underwrite their activities, and those who provided the war goods, munitions and foodstuffs on credit against anticipated returns from military success.' Likewise, social ambitions – noble titles, enhanced social status, and reinforced political standing in relation to the ruler – were important background factors, although Parrott admits that military enterprise was not 'an easy and much-frequented route from obscure origins to high noble status'.[7]

A third model has been offered by Jan Glete, who emphasises the state's role in the market with respect to protection and the control of violence. According to him, different social groups were willing to cooperate with the state in exchange for protection for their own activities. For instance, merchants involved in foreign trade benefited from rulers' capability to control the seas. Glete's explanation accepts that, in some European states, private contracting was used because rulers did not have enough administrative skills and power to run armed forces on their own. He insists, however, that ambitious rulers had 'strong incentives to develop superior administrative capabilities of their own, and such capabilities made it easier for them to cooperate with private groups who also had competence and access to resources'. In his view, private actors preferred to cooperate with strong rulers capable of actually ruling their territories.[8]

However, the phenomenon also had a reverse – and much less researched – side. Not all civilians involved in military maintenance were wealthy merchants and 'entrepreneurial commanders' in search of profit and status. Common townspeople and rural communities were also massively involved in such maintenance operations in early modern Europe.

---

[7] Parrott 2012, pp. 241–250.

[8] Glete 2002; Glete 2010, p. 663.

Giulio Ongaro's recent work *Peasants and Soldiers* explores this side of the equation by concentrating on the Republic of Venice, where rural families provided hay, wood and housing for mercenary troops, which the republic recruited almost constantly. Moreover, Venetian communities had to provide men and weapons for rural militia – a numerically substantial subject army that was used for garrison duties and defensive warfare – and to ensure that the soldiers received adequate training and compensation. The agrarian population was also needed for the construction of fortresses, saltpetre production, and other military-related work.

Ongaro's premises differ from studies devoted to military contracting in that he includes all the non-state actors in his analysis, including the rural elite, manual labourers, and peasants. Some of these groups, such as estate owners, managed to benefit financially from the militarisation of the countryside, but in many Venetian regions the increased needs for provisioning and providing lodging for troops, together with the conscription of militiamen, oarsmen and sappers, caused severe economic difficulties for rural dwellers.[9] The same kind of argument has also been made for other European regions. According to Myron Gutmann, the lodgement of troops was the real scourge for the people in the Low Countries, rather than battles and sieges.[10]

***

The early modern Swedish Realm was, administration-wise, one of the most advanced countries in Europe. After emerging from the Middle Ages by cutting ties with the Danish-led Kalmar Union in the 1520s, it evolved quickly into an effective bureaucratic state under the forceful rule of the House of Vasa. A well-functioning government, efficient tax-collecting system and powerful military machine enabled the northern kingdom to become a European superpower.

[9] Ongaro 2017.
[10] Gutmann 1980.

During the so-called Swedish Age of Greatness, which more or less overlapped with the 17th century, the Swedes were in a near-constant state of war with neighbouring nations – the Russian Empire, Poland, the German states and Denmark. Exploiting the military weakness and national disunity of their neighbours, they created a multinational realm that ruled most of the coasts of the Baltic Sea (see Figure 1.1). This greatness, however, was not permanent – the large and disjointed new realm was difficult to rule and vulnerable to attacks.

Figure 1.1: The Swedish conquests in 1560–1660.
Source: Toivo 2007, p. 87. Map drawn by Petri Talvitie.

In the devastating Great Northern War (1700–1721), the neighbours, who had caught up with the Swedes through their own military revolutions, got their revenge. As the result of the war, the Swedish Realm was reduced to its pre-greatness borders and downgraded to a second-rate European power.

In the 18th century, the Swedes turned from front-runners to underdogs. Most of their military budget went to the defence of their new smaller realm, rather than to waging wars of conquest, and the few wars they partook in ended more or less catastrophically. The Finnish War (1808–1809) marked the final humiliation: the old Swedish Realm was split in half, with Finland being annexed by the Russian Empire and the remaining part of the realm continuing its existence as the new Kingdom of Sweden.

As the Swedish military evolved, so too did the ways to man and maintain the army. For most of the Age of Greatness, the Swedish army was conscripted separately for every war, with every village obliged to provide able-bodied men to the service of the crown. From the 1680s onwards, conscription was replaced by the allotment system, which allowed the realm to have a low-cost and reasonably effective standing army. The villages were now obliged to recruit soldiers and give them a cottage and a patch of land. When such soldiers were not at war or tending to military exercises, they lived the life of a smallholding farmer.

The allotment system was in effect for all of the 18th century, but enlisted troops increasingly gained in stature beside it. Rapidly developing military branches such as the navy, as well as artillery and fortifications, could not be manned by allotted troops, as they required soldiers who were in permanent service. This increased the size and importance of enlisted troops within the Swedish military machine. Unlike the allotted soldiers, who resided at the countryside, enlisted troops were a distinctively urban phenomenon, as the garrisons, naval bases and fortresses were concentrated in towns.

The early modern Swedish Realm is a well-known and often-cited case amongst international military historians. Michael

Roberts, who fathered the concept of military revolution in the 1950s, was a specialist in Swedish history and based his theoretical approach on Swedish examples.[11] Also, Swedish historians themselves have been active in reworking and refining the concept. The front-runner has been the aforementioned Jan Glete, whose works on the connections between naval history and state-building are considered international classics.[12]

The concept, however, has also been fiercely attacked. Critics of Michael Roberts, such as Jeremy Black, have accused him on relying too much on Swedish history and thus overplaying the role of military in state-building. According to these critics, the Swedish Realm, with its reasonably well-functioning and uncorrupted governmental machine, was a European anomaly rather than a representative case.[13]

In building and upkeeping their military machine, the Swedes were eager to adopt the European models of maintenance. However, those models were developed in Western and Central Europe, where the populations were dense, distances short, agriculture productive, and towns large and wealthy. The Swedish Realm was a large and scarcely populated country where distances were long and weather harsh, and most of its towns would barely have been considered villages in the wealthier parts of the continent.

Many of the problems encountered by armies throughout Europe – such as the difficulty of gathering resources and organising transportation during autumn and winter months – were much more severe in the Swedish Realm.[14] Some problems, in addition, were unique to the north – the freezing sea cut off maritime connections and made boat transportations impossible during wintertime, a problem that entrepreneurial commanders in Britain or France rarely had to consider.

---

[11] Roberts 1988.
[12] See, e.g. Glete 2002; Glete 2010.
[13] Black 1991.
[14] See, e.g. Black 1991, pp. 40–42.

Although Sweden is a well-known and often-cited case, historians like Michael Roberts and Jan Glete have researched the interaction between military and civil society mainly at the upper level, analysing the impact of military evolution on state formation and the development of modern bureaucracy. The grassroots level, namely the role played by ordinary towns and rural communities in Sweden and Finland in terms of financing, feeding, accommodating and provisioning the army, has attracted less attention.

The role of civilians in army maintenance has been studied mainly during wartime. Most recently, Christer Kuvaja has studied how the Russian army utilised Finnish peasants for its maintenance operations during the occupation period of the Great Northern War (1713–1721), and Martin Hårdstedt has analysed the maintenance system of the Swedish army during the Finnish War (1808–1809).[15] Peacetime civil–military interaction has so far been best analysed by the pan-Nordic research project *Garnisonsstäder i norden* ('Garrison Towns in the North') in the 1980s. The project analysed military towns in all the Nordic countries, with a special focus on the early modern period. However, it largely omitted themes like financing and maintenance, focusing on the military impact on the visual and demographic development of towns, and the rows and disputes between the army and civilian citizens regarding management of the local government and the right to conduct business in the military towns.[16]

***

The main objective of the present anthology is to analyse the role of civilians in the military supply systems in the early modern Swedish Realm, both in the towns and in the countryside. It aims to answer how the army sought to exploit

[15] Kuvaja 1999; Hårdstedt 2002.

[16] See, e.g., Artéus 1997.

civilians – burghers, peasants, entrepreneurs – in order to provision itself, and how the civil population managed to benefit from such cooperation.

David Parrott argues that typical early modern European governments were ineffective, undermanned and corrupted, but managed to effectively mobilise military resources by cooperating with private under-contractors and financiers. At first glance, the situation seems to have been the reverse for the kings of Sweden: they had one of the most effective governments in Europe, but also a vast realm scarce of people and capital. The dichotomy between market-based and governmental allocation of resources lies at the core of this book. To what extent and in what ways were the Swedish decision makers able to utilise civil society in the building and upkeeping of its military machine, and how did the special characteristics of the realm affect the said utilising?

The book does not concentrate on conscription, allotment or recruitment, which were arguably the most important ways that people in the towns and countryside subsidised the Swedish army. These themes have been actively studied by military historians both in Sweden and in Finland, and new openings have been published even in recent years. Instead, it aims to give perspective to the much less researched theme of how the army used civil society for its maintenance purposes: how did it purchase food, drink and accommodation for its soldiers and material for its needs, and how did it finance its military campaigns?

The outsourcing of military activities will be analysed in several chapters focusing on such themes as the manufacturing of saltpetre, wartime credits and the provisioning of soldiers. These chapters offer an interesting point of comparison for studies devoted to more urbanised and densely populated regions. The different chapters are relatively independent of each other in terms of their approach to the overall themes of the book, as some of them are closely connected to the above-mentioned discussions on military enterprises and state formation, while others are more related to debates on civil–military relations in the Nordic countries.

The concept of 'civilians' is understood broadly in the book. Several of its chapters discuss military officers who served as financers and providers of the Swedish army. As this financing and provisioning was not part of their official duties as officers, but a private business they ran on the side for various reasons – to gain financial profit, to look good in the eyes of the crown, or just to save their troops from starvation and slaughter – they are interpreted as civilian entrepreneurs.

The geographical focus of the book is the eastern part of the pre-1809 Swedish Realm. Referred during the Middle Ages simply as 'Eastland' (*Österlandet*), it was commonly known by the name of Finland during the early modern centuries. The eastern half of the realm was pivotal to the maintenance of the Swedish army, as it had strategic significance as a provider of raw materials, and it was Swedish Realm's frontier against its perennial competitor, Russia. Most Russo-Swedish wars were fought on Finnish soil and required the efforts of Finnish country and town people – accommodating, feeding and provisioning the troops, sometimes for their own army, and sometimes for the occupying enemy.

Furthermore, Swedish crown's peacetime plans and projects for the development of its eastern defences usually also required the efforts and services of Finnish peasants and townspeople, from the saltpetre production of the 17th century to the construction of the sea fortress of Sveaborg in the 18th century. Thus, the civilian citizens of the eastern part of the realm were affected by the needs of military maintenance, both during wartime and in times of peace, more frequently than their western neighbours.

The chapters are thematically divided into three parts, the first of which deals with the financing of wars. It is opened by Jaakko Björklund, who in Chapter 2 illustrates how the officers of the Swedish army largely financed the Ingrian War (1609–1617), in which the Swedes conquered the provinces of Ingria and Kexholm from Russia. As half a century of almost uninterrupted warfare had emptied the treasuries of the Swedish Realm, and as it was simultaneously fighting another war against the Danes, the Ingrian War became almost a private enterprise of the high officers of the army. Björklund's evidence shows that, without

the officers, their capital and connections, and their willingness to finance the warfare, the Ingrian War would have ended in catastrophe, instead of becoming one of the founding stones of Sweden's Age of Greatness.

In Chapter 3, Kasper Kepsu continues the theme by discussing the burghers of Nyen, the Swedish settlement and largest trading town in Ingria, and their role as financers of the Great Northern War (1700–1721), which marked the end of Swedish Ingria and the ceding of the area back to Russia. As the battle over Ingria and Finland prolonged, the Nyen merchants – and particularly the wealthiest of them, Johan Henrik Frisius – became indispensable for the crown as suppliers and financiers. Even though Frisius and his colleagues were refugees from their destroyed hometown, they had better international connections and credit standing than the Swedish crown and managed to operate more efficiently at the markets than the royal officials.

In Chapter 4 that concludes the first part, Petri Talvitie analyses the sales of crown farms as a form of financing the war. The early modern Swedish crown was a major landowner, as, under Swedish law, all farms deserted or unable to pay their taxes three years in a row became crown property. Talvitie shows how the selling of these farms to private buyers became an important source of revenue in the 18th century, first to finance the Great Northern War and later to cover the massive public debt created by the war. By purchasing crown farms, private Swedish and Finnish individuals became indirectly important financiers of war.

The second part deals with the role of countryside and rural population in military maintenance. It is opened by Mirkka Lappalainen, who in Chapter 5 analyses the manufacturing of potassium nitrate in late 16th- and early 17th-century Finland. In order to secure its self-sufficiency in gunpowder manufacturing at the eve of its Age of Greatness, the Swedish crown built a network of state-owned saltpetre works and obliged peasants to deliver the raw materials. The system did not function as hoped for several reasons, not least because of the burdensome 'saltpetre tax', which created conflicts between the local peasants and the crown's men, and it was fairly quickly abandoned for other solutions.

Next, in Chapter 6, Sampsa Hatakka discusses the maintenance challenges of the Russo-Swedish War of 1741–1743, arguably one of the biggest military catastrophes in Swedish history. Hatakka shows that maintenance problems were one of the root causes for the catastrophe. The war was declared without proper preparations, and the decision makers in Stockholm realised only too late that Finland lacked grain storages, mills and bakeries. The crown's hastily attempts to improve the situation by building new infrastructure and outsourcing bread-making to civilians were of little avail, thanks to scarce population, limited resources, and transportation difficulties. Thus, the Swedish army had to use the critical first months of the war for solving maintenance problems instead of fighting, a fact that contributed heavily to its loss.

In Chapter 7, the final chapter of the third part, Anu Lahtinen offers a long-term microhistorical perspective of the effects of the military on the rural population by following the history of two southern Finnish villages, Hyvinkää and Kytäjärvi, from the 16th to the 18th century. Although the villages were directly touched by war only a couple of times during the period, they were continuously shaped by the indirect presence of warfare and military readiness. They paid taxes to finance the military, lost a significant amount of their male workforce in wars, were obliged to provide upkeep for passing troops, and had to endure new manor lords who gained land grants in return for military service and disturbed the local power balance.

The third part deals with the role of towns and urban population in military maintenance. The chapters by Juha-Matti Granqvist and Sofia Gustafsson discuss the town of Helsinki during the construction of Fortress Sveaborg. Founded in 1747 to be the keystone of the Swedish Realm's eastern defence, Sveaborg was the biggest construction project in the history of the old realm and turned the small Finnish town of Helsinki into a massive building site. The fortress needed massive amounts of construction materials, as well as food, drink and accommodation for its many thousands of soldiers and workers.

In Chapter 8, Juha-Matti Granqvist traces the evolution of the Helsinki burgher community during the fortress construction years, arguing that the close and long-lasting interaction between the town and the fortress gave birth to a special 'military town bourgeoisie'. Guided by the forces of supply and demand, through the process of trial and error, the local burgher community slowly evolved into a shape that was ideal in serving the military. In Chapter 9, Sofia Gustafsson discusses the soldier billeting system, in which the townspeople were obliged to lodge soldiers in their homes. Gustafsson shows that, even though the billeting was a heavy burden to the local burghers, the co-existence of soldiers and civilians in same houses and rooms was in itself surprisingly peaceful. One of the reasons is that the garrison soldiers began, from an early stage, to interact closely with the local community, demonstrated for example by the numerous marriages between them and the local women.

Bibliography and Sources

Literature

Artéus, Gunnar (1997). *Nordens garnisonsstäder*. Stockholm: Försvarshögskolan.

Bannerman, Gordon (2008). *Merchants and the military in eighteenth-Century Britain. British army contracts and domestic supply, 1739–1763*. London: Routledge.

Black, Jeremy (1991). *A military revolution? Military change and European society 1550–1800*. London: Macmillan Education Ltd.

Fynn-Paul, Jeff et al. (2014). Entrepreneurs, military supply, and state formation in the late medieval and early modern periods: New directions. In Jeff Fynn-Paul (ed.), *War, entrepreneurs, and the state in Europe and the Mediterranean, 1300–1800* (pp. 1–12). Leiden: Brill.

Glete, Jan (2002). *War and the state in early modern Europe. Spain, the Dutch Republic and Sweden as fiscal-military states, 1500–1660*. London: Routledge.

Glete, Jan (2010). *Swedish naval administration, 1521–1721. Resource flows and organisational capabilities*. Leiden: Brill.

Goossens, Thomas (2014). The grip of the state? Government control over provision of the army in the Austrian Netherlands, 1725–1744. In Jeff Fynn-Paul (ed.), *War, entrepreneurs, and the state in Europe and the Mediterranean, 1300–1800* (pp. 193–211). Leiden: Brill.

Gutmann, Myron P. (1980). *War and rural life in the early modern Low Countries*. Assen: van Gorcum.

Hallenberg, Mats, Holm, Johan, & Johansson, Dan (2008). Organization, legitimation, participation. State formation as a dynamic process – the Swedish example, c. 1523–1680. *Scandinavian Journal of History, 33*(3), pp. 247–268.

Hårdstedt, Martin (2002). *Om krigets förutsättningar. Den militära underhållningsproblematiken och det civila samhället i norra Sverige och Finland under Finska kriget 1808–1809*. Umeå: Umeå universitet.

Knight, Roger, & Wilcox, Martin (2010). *Sustaining the fleet, 1793–1815. War, the British navy and the contractor state*. Woodbridge: Boydell Press.

Kuvaja, Christer (1999). *Försörjning av en ockupationsarmé. Den ryska arméns underhållningssystem i Finland 1713–1721*. Åbo: Åbo Akademi.

Lynn, John A. (1997). *Giant of the Grand Siècle. The French army, 1610–1715*. Cambridge: Cambridge University Press.

Ongaro, Giulio (2017). *Peasants and soldiers. The management of the Venetian military structure in the mainland dominion between the 16th and 17th centuries*. London: Routledge.

Parker, Geoffrey (1988). *The military revolution. Military innovation and the rise of the West*. Cambridge: Cambridge University Press.

Parrott, David (2012). *The business of war. Military enterprise and military revolution in early modern Europe*. Cambridge: Cambridge University Press.

Perjés, Géza (1970). Army provisioning, logistics and strategy in the second half of the 17th century. *Acta Historica Academiae Scientiarum Hungaricae, 16*(1/2), pp. 1–52.

Redlich, Fritz (1964). *The German military enterpriser and his work force, 14th to 18th centuries. Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte 47/48*. Vol. 1. Wiesbaden: Franz Steiner Verlag.

Tilly, Charles (1990). *Coercion, capital, and European states, AD 990–1990*. Cambridge: Basil Blackwell.

Toivo, Raisa Maria (2007). Suomen alue Ruotsin ajalla. In Pertti Haapala & Raisa Maria Toivo (eds), *Suomen historian kartasto* (pp. 86–87). Helsinki: Karttakeskus.

Torres Sánchez, Rafael (2016). *Military entrepreneurs and the Spanish contractor state in the eighteenth century*. Oxford: Oxford University Press.

Torres Sánchez, Rafael et al. (2018). War and economy. Rediscovering the eighteenth-century military entrepreneur. *Business History, 60*(1), pp. 4–22.

van Creveld, Martin. (1977). *Supplying war. Logistics from Wallenstein to Patton*. Cambridge: Cambridge University Press.